ABSTRACT OF THE DISCLOSURE

An embodiment of the invention provides a method for reducing within die thickness variations by modifying the concentration of components of a low-acid electroplating solution. For one embodiment, the leveler concentration is increased sufficiently to reduce within die thickness variations to a specified value. For one embodiment of the invention, the leveler and suppressor are increased to reduce within die thickness variations and substantially reduce a plurality of electroplating defects. In such an embodiment the combined concentration of leveler and suppressor is determined to maintain adequate gap fill.